E-Sports Engagement among University Students in Thailand: Behavioral Patterns and Attitudinal Insights

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Abstract

This study explores E-Sports playing behaviors and attitudes among undergraduates at Thailand National Sports University, Chiang Mai Campus. A mixed-method approach was employed, specifically targeting students from the Faculty of Liberal Arts, Faculty of Sports and Health Science, and Faculty of Education. The study aimed to: (1) investigate E-Sports engagement patterns, (2) examine student attitudes toward E-Sports as a digital sport, and (3) analyze how these behaviors and attitudes differ by demographics. Data analysis involved descriptive statistics, t-tests, and ANOVA. A total of 311 students from three faculties were surveyed. Results indicated that most students engaged in E-Sports for entertainment and stress relief, primarily playing the game "ROV" during evening hours. Behavioral engagement levels were high ($\bar{x}$ = 4.32, S.D. = 0.58). Students held positive attitudes toward E-Sports, viewing it as a legitimate sport and a helpful tool for stress relief, rather than a disruption to academic performance. Comparative analysis also showed significant differences in engagement and attitudes across demographics, especially regarding gender and faculty. These insights offer clear guidance for educational institutions looking to design structured E-Sports curricula. The findings emphasize the rising significance of E-Sports as a digital sport and suggest institutional roles in supporting structured E-Sports programs.

Keywords: Thailand, Digital Sports, Digital Gaming Behavior, Student Attitude, E-Sports Engagement

Introduction

The global popularity of E-Sports has surged in recent years, becoming an essential element of youth digital culture. E-Sports refers to organized competitive gaming events played individually or in teams, often in professional tournament settings, supported by live streaming and massive fan followings (Hamari & Sjöblom, 2017). According to Newzoo (2023), the global E-Sports audience surpassed 540 million people, and the market revenue exceeded $1.38 billion USD, illustrating rapid commercial and cultural growth.

In Thailand, E-Sports has gained momentum both as a leisure activity and as a recognized professional field. In 2017, the Sports Authority of Thailand formally recognized E-Sports as an official sport, opening doors for the development of athletes, clubs, and tournaments (Ministry of Tourism and Sports, 2017). Popular games such as Arena of Valor (ROV), PUBG, and Free Fire dominate the Thai youth gaming scene (Digital Economy Promotion Agency (DEPA), 2022).

While concerns about excessive gaming and digital addiction persist, structured E-Sports ecosystems offer opportunities for developing cognitive skills, teamwork, and career pathways in digital industries (Jenny et al., 2017; Reitman et al., 2020). Especially in educational settings, the integration of E-Sports into student life poses questions about time management, academic impact, and social behaviors (Anderson & Jiang, 2018). In addition, global studies show that heavy E-Sports gaming frequently leads to mental health issues and poor sleep, particularly sleep deprivation and gaming addiction (Bányai et al., 2019). When players manage their time poorly, it ends up hurting both their academic and athletic performance (Smith et al., 2019). Ignoring these factors in sports-focused institutions leaves a major gap in our understanding of how future sports professionals cope with the pressures of digital sports.

In addition to cultural and behavioral dimensions, E-Sports depends heavily on data communication and computer networking infrastructure. Low-latency, high-bandwidth connections are essential for seamless competitive play and real-time streaming, while network reliability directly affects fairness in competitions. As such, E-Sports provides a practical example of how modern

communication networks influence digital business applications, aligning with academic perspectives in computer networking and business information systems (Nagorsky & Wiemeyer, 2020).

Despite the rise of E-Sports, academic research on its behavioral and attitudinal dimensions remains limited in physical education institutions. Most prior studies have focused on mainstream universities or general youth populations (Seo, 2016), thereby leaving a major gap in the literature. Since sports university students have a distinct athletic identity and represent the next generation of sports professionals, missing this group limits our insight into how digital and traditional sports connect. Without this understanding, it is difficult to build evidence-based E-Sports curricula and training frameworks within sports science. This study fills that gap by examining E-Sports engagement at a national sports university in Thailand, where traditional athletic identity intersects with modern digital sport.

This study investigates E-Sports playing behaviors and attitudes among undergraduate students at Thailand National Sports University, Chiang Mai Campus, offering insights into how digital sport fits within the athletic identity of sports university students.

Objectives

1. To investigate behavioral patterns of E-Sports engagement among undergraduate students at Thailand National Sports University, Chiang Mai Campus.

2. To examine student attitudes toward E-Sports as a form of digital sport.

3. To analyze demographic differences in E-Sports engagement and attitudes.

Literature Review

This study is grounded in the Selective Exposure Theory, which posits that individuals actively seek out media content that aligns with their existing beliefs, preferences, and emotional states (Knobloch-Westerwick, 2015). In the context of E-Sports, this theory helps explain why students choose specific types of games, play schedules, and online communities that reflect their identity and motivations. Moreover, Uses and Gratifications Theory (UGT) provides a supplementary lens by framing E-Sports engagement as a purposeful activity to fulfill psychological needs such as entertainment, social interaction, and escapism (Rubin, 2009).

Several studies have highlighted the cognitive and social benefits of E-Sports. For instance, Adachi and Willoughby (2013) and Bányai et al. (2019) found that strategic gameplay enhances decision-making skills and promotes team collaboration. In an academic context, E-Sports can foster community engagement and digital literacy (Jenny et al., 2017). Participation in E-Sports is also shown to influence motivation and self-perception among students. According to Martončik (2015), players often report a sense of competence and social acceptance within the gaming community, which correlates with higher engagement levels.

According to the GMOR survey, the most popular E-Sports platform in Thailand is YouTube Gaming, with 56.9% of gamers using the platform for viewing or participating in E-Sports. Coming in a close second is Facebook Gaming at 51.3%, and third is Garena at 26.4%.

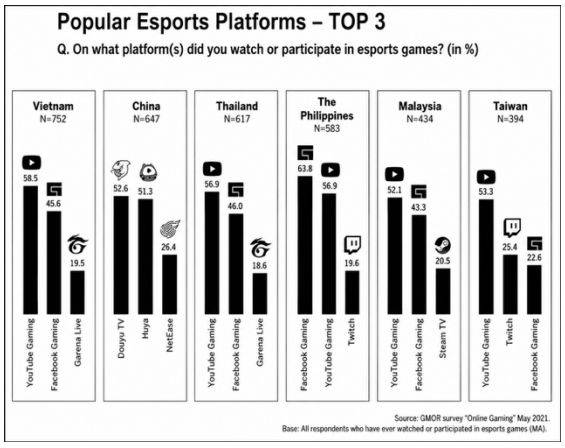


Figure 1 The most popular E-Sports platforms across various countries, including Thailand. *Source: Greenbook, 2021, Asia Leads the Way in Esports Growth*

In Thailand, DEPA (2022) reported that over 32 million people play video games regularly, and youth participation in mobile E-Sports is on the rise. Thai researchers have also emphasized the dual nature of E-Sports—both as a risk for digital addiction and as a vehicle for digital entrepreneurship (Thawonmas et al., 2020). Studies by Seo (2016) and Taylor (2016) explore the professionalization of E-Sports and the construction of digital athlete identities. These insights are particularly relevant for students in a sports university, where physical and digital sporting identities may intersect.

As shown in Figure 2, the conceptual framework integrates two key theoretical perspectives. Behavioral Patterns and motivations are rooted in the Uses and Gratifications (U&G) Theory (Rubin, 2009), while Attitudinal Dimensions—specifically professionalization and identity integration—are guided by Seo (2016) and Taylor (2016).

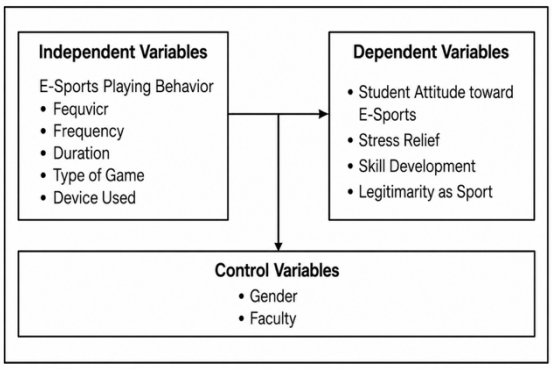


Figure 2 Illustrates the conceptual relationship between exposure, motivation, and behavioral engagement

Research Methodology

This study employed a cross-sectional quantitative survey design to examine E-Sports behavior and attitudes among undergraduate students. The target population consisted of 1,293 students across three faculties: the Faculty of Liberal Arts, the Faculty of Sports and Health Science, and the Faculty of Education. Stratified random sampling ensured proportional representation. A sample size of 311 respondents was determined using Taro Yamane's (1973) formula.

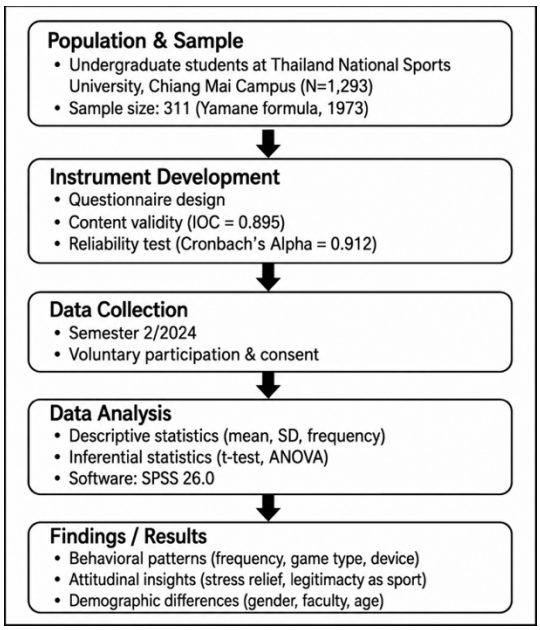


Figure 3 Research method flow of the study.

1. Instrument Development

The instrument was a structured self-administered questionnaire developed from previous studies (Qian et al., 2020; Funk et al., 2018). It covered demographics, E-Sports behavior, and attitudes toward E-Sports. Content validity was verified through Item-Objective Congruence (IOC = 0.895). Reliability was confirmed with Cronbach's Alpha (0.912).

2. Data Collection

Conducted during the second semester of the 2024 academic year. Participation was voluntary and based on informed consent, and procedures adhered to the Declaration of Helsinki.

3. Data Analysis

Descriptive statistics were used to summarize of the data. Inferential statistics (t-tests, ANOVA) were used to examine differences across demographics. SPSS 26.0 was used for analysis.

A group-comparison approach (t-test/ANOVA) was used to analyze demographic differences. Since the study's objectives are non-predictive, regression analysis was not required.

Results and Discussion

1. Demographic Profile

Among 311 respondents, 56.6% were male and 43.4% female. Most were aged 18–21 years. Faculty representation included Liberal Arts (41.2%), Sports and Health Science (32.5%), and Education (26.3%).

2. Behavioral Trends

Table 1 presents the descriptive statistics of students' E-Sports playing

behavior, including frequency, duration, preferred time of day, most played game, and device used

Table 1 E-Sports Playing Behavior

Variable	$\bar{x}$	SD	Interpretation
Frequency of E-Sports gameplay	4.32	0.58	High
Duration per gaming session	3.87	0.72	Moderate
Time of day most active	–	–	Evening (18:00–22:00)
Most played game	–	–	Arena of Valor (ROV)
Device used	–	–	Smartphone (88.4%)

Students predominantly played E-Sports in the evenings (18:00–22:00), mainly on smartphones (88.4%). **Arena of Valor (ROV)** was the most popular game. Average frequency scores indicated high engagement ($\bar{x}$ = 4.32, S.D. = 0.58), while session duration was moderate ($\bar{x}$ = 3.87, S.D. = 0.72).

Table 2 Attitudes Toward E-Sports

Attitudinal Aspect	$\bar{x}$	SD	Interpretation
E-Sports as a legitimate sport	4.45	0.61	Agree
Value in skill development	4.39	0.66	Agree
Usefulness for stress relief	4.67	0.48	Strongly agree
Disruption to academics (reverse scored)	2.21	0.91	Disagree
Future career opportunity	3.94	0.73	Agree

3. Attitudes toward E-Sports

Students' attitudes toward E-Sports were generally positive, as shown in Table 2. They strongly agreed that E-Sports provides stress relief ($\bar{x}$ = 4.67) and recognized its legitimacy as a sport ($\bar{x}$ = 4.45). Meanwhile, they disagreed with the notion that E-Sports disrupts academics ($\bar{x}$ = 2.21).

4. Comparative Analysis

Significant gender differences were found, with male students engaging more frequently (t = 2.67, p < .01). Attitudes also varied by faculty, with Education students

showing the most favorable views (F = 4.21, p = .016).

5. Discussion

The findings align with Uses and Gratifications Theory, suggesting students engage in E-Sports primarily for stress relief and entertainment. The recognition of E-Sports as a legitimate sport reflects changing cultural perceptions (Jenny et al., 2017). Positive attitudes toward skill development support its integration into student life programs (Funk et al., 2018). Demographic variations highlight the influence of gender and academic background.

Beyond behavioral insights, the findings also reflect the **technological dependence of E-Sports on network infrastructure**. Students' preference for mobile-based play emphasizes the role of wireless communication technologies such as 4G and 5G, while competitive fairness depends on stable connections with minimal latency. These results suggest that in addition to sociocultural aspects, E-Sports inherently demonstrates the critical role of computer networks in digital sport ecosystems, reinforcing the relevance of data communication and networking concepts taught in business information systems and ICT-related curricula.

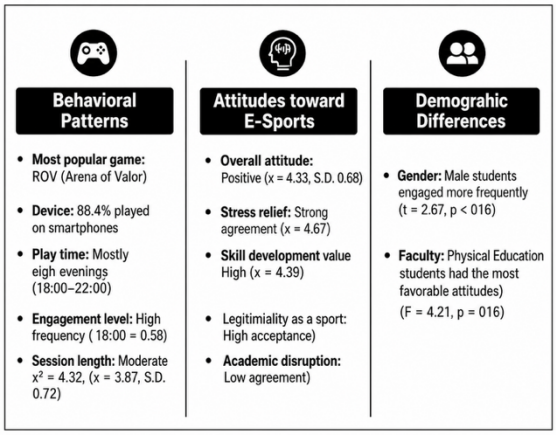


Figure 4 Summary of behavioral and attitudinal findings from the study.

These findings align with Uses and Gratifications Theory (UGT) and Selective Exposure Theory. Students' primary motivations—entertainment and stress relief—demonstrate the active pursuit of affective gratification, where engaging in digital sports like 'ROV' serves as a deliberate coping mechanism against academic anxiety. The observed demographic variations—namely gendered differences in behavioral engagement (t = 2.67, p < .016) and attitudinal shifts across faculties (F = 4.21, p = .016), confirm that media gratification is not uniform and highlight how social and academic environments actively shape selective exposure patterns.

Qualitative interviews revealed that peer group socialization and outside school gaming cultures drive higher male engagement. Meanwhile, physical education students' positive attitudes stem from viewing E-Sports as a legitimate

athletic domain, noting that strategic mobile gameplay mirrors traditional sports through cognitive demands, motor coordination, and teamwork—positioning it as a modern sports pedagogy tool.

Practically, it establishes the first empirical baseline for Thailand National Sports University, demonstrating that mobile gaming (e.g., 'ROV') functions as a structured coping mechanism rather than an academic disruption. These outcomes offer concrete evidence for institutions to shift from restrictive policies to proactive, curriculum-integrated E-Sports management.

A key limitation involves reliance on self-reported data, which may introduce subjective bias or recall inaccuracies regarding gaming frequency and duration.

Conclusion

This study highlights the integral role of E-Sports in Thai university students' lives. Students view E-Sports as both entertainment and a tool for stress management, while also recognizing its potential for skill development and career opportunities. Findings underscore the importance of structured institutional support to maximize the benefits of E-Sports while ensuring balanced student lifestyles.

Recommendations

1. Establish dedicated E-Sports clubs and facilities within universities.

2. Promote healthy gaming habits alongside academic responsibilities.

3. Foster career pathways through partnerships with E-Sports industry stakeholders.

4. Integrate E-Sports into extracurricular programs to enhance collaboration and digital skills.

5. Invest in **robust networking infrastructure** (e.g., high-speed LAN, optimized Wi-Fi, low-latency servers) within universities to support E-Sports competitions and learning opportunities in ICT-related courses.

6. Incorporate E-Sports-related case studies into **data communication and computer networking curricula**, allowing students to analyze real-world network performance challenges.

7. Since mobile 'ROV' engagement peaks during evenings (18:00–22:00), institutions should replace restrictive internet blackouts with designated campus digital sports hubs featuring extended hours and health monitoring."

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